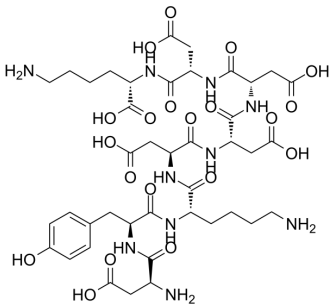
FLAG peptide



Cat. No.:	HY-P0223
CAS No.:	98849-88-8
Molecular Formula:	$C_{41}H_{60}N_{10}O_{20}$
Molecular Weight:	1012.97
Sequence:	Asp-Tyr-Lys-Asp-Asp-Asp-Asp-Lys
Sequence Shortening:	DYKDDDDK
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (98.72 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.9872 mL	4.9360 mL	9.8720 mL
	5 mM	0.1974 mL	0.9872 mL	1.9744 mL
	10 mM	0.0987 mL	0.4936 mL	0.9872 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (98.72 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

FLAG peptide is an eight amino acids peptide (Asp-Tyr-Lys-Asp-Asp-Asp-Asp-Lys) with an enterokinase-cleavage site; designed for antibody-mediated identification and purification of recombinant proteins.

In Vitro

Fusion protein technology has become an important tool for solving numerous problems linked to recombinant protein production. The properties of the additional tag facilitate identification and provide a one-step purification procedure of the fusion protein by passing cell extracts or supernatants through columns of an appropriate matrix. FLAG peptide allows elution under non-denaturing conditions. Several antibodies against FLAG peptide have been developed. One antibody, M1, binds the peptide in the presence of bivalent metal cations, preferably Ca^{2+}. Elution is effected by chelating agents. Another strategy is competitive elution with excess of free FLAGe peptide. Antibodies M2 and M5 are applied in this procedure[1]. The

Flag-tag is first described as a calcium-dependent epitope of a monoclonal antibody. It is a highly acidic octapeptide which can be N-terminally fused to the protein of interest. As a very hydrophilic peptide the Flag–tag has a high surface probability. Flag-fusion proteins can be captured by an immunoaffinity column in the presence of Ca^{2+} and eluted byEDTA at low concentrations, neutral pH and thus, nearly physiological conditions[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Differ. 2022 Dec 16.
- Sci China Life Sci. 2020 Sep;63(9):1-12.
- Oncogene. 2019 Jan;38(5):747-764.
- Free Radic Biol Med. 2022 May 20;185:67-75.
- Int J Biochem Cell Biol. 2022 Feb 24;106188.

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REFERENCES

[1]. Einhauer A, et al. The FLAG peptide, a versatile fusion tag for the purification of recombinant proteins. J Biochem Biophys Methods. 2001 Oct 30;49(1-3):455-65.

[2]. Schuster M, et al. Protein expression in yeast; comparison of two expression strategies regarding proteinmaturation. J Biotechnol. 2000 Dec 28;84(3):237-48.

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